

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): An interconnect structure comprising:
a first planar network of electrical conductors formed in a first deposition process;
a second planar network of electrical conductors formed in a second deposition process, and separated from the first planar network by a separation region; and
a single interlevel dielectric material disposed within the separation region and extending into a portion of the first planar network, without other intervening insulating materials between the first and second planar networks, such that the interlevel dielectric material has a planarized surface that interfaces the second planar network of electrical conductors, the interlevel dielectric material comprising a polysiloxane network consisting essentially of silicon, oxygen, carbon and hydrogen and incorporating carbon-silicon bonding and having a dielectric constant of less than about 3.3.

Claim 2 (previously presented): The interconnect structure of Claim 1, wherein the interlevel dielectric material has a dielectric constant of less than about 3.2.

Claim 3 (previously presented): The interconnect structure of Claim 1, wherein the interlevel dielectric material has a carbon content of between about 5% and 20% relative to a silicon content.

Claim 4 (previously presented): The interconnect structure of Claim 1, wherein the first and second planar networks comprise metal runners.

Claim 5 (currently amended): An integrated circuit comprising:
a first planar network of electrical conductors formed in a first deposition process, and providing a first electrical path of the circuit;

Application Number 10/033,656
Amendment dated 9 July 2004
Reply to Office Action of 13 February 2004

a second planar network of electrical conductors formed in a second deposition process, and providing a second electrical path of the circuit, the second planar network separated from the first planar network by a gap; and

an interlevel dielectric material directly contacting the first and second planar networks, filling the gap between the first and second planar networks, having a planarized surface interfacing with the second planar network, and extending into a portion of the first planar network, the interlevel dielectric material comprising polysiloxane, consisting essentially of silicon, oxygen, carbon and hydrogen and incorporating carbon therein and having a dielectric constant of less than about 3.5.

Claim 6 (previously presented): The integrated circuit of Claim 5, wherein the interlevel dielectric material has a dielectric constant of less than about 3.3.

Claim 7 (previously presented): The integrated circuit of Claim 6, wherein the first and second planar networks comprise metal runners.

Claim 8 (previously presented): The integrated circuit of Claim 6, wherein the first and second planar networks comprise transistor active areas within a semiconductor substrate.

Claim 9 (previously presented): The integrated circuit of Claim 8, wherein the interlevel dielectric material comprises a sidewall spacer.

Claim 10 (canceled).